

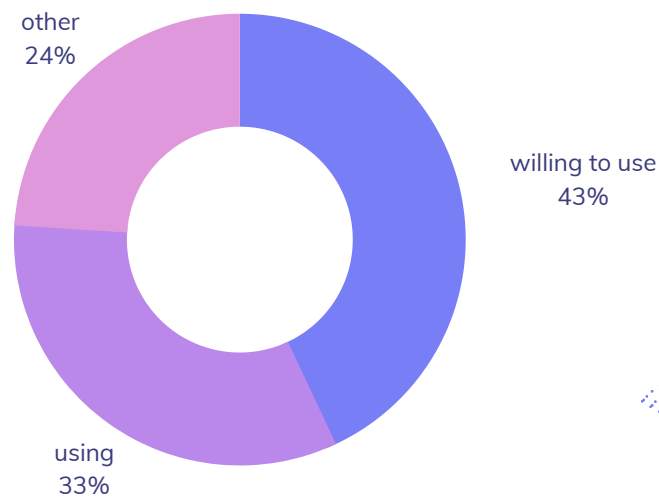
Future of E-commerce

Customer perception and determining factors

Abstract

Retail has been a constantly upgrading sector overcoming various challenges thrown its way. With evolving business models and exploring the new dimensions of AI, ML and VR, retailers are leaving no stone unturned! With differentiation as the prime factor, many recent developments like Augmented Reality and Virtual Reality are being integrated to augment customer experience. Interacting with a product virtually with an added touch of personalization is envisioned to increase customer engagement as well as investment. Going by the recent publication from business insider, as much as around **85%** of customer interactions will happen without any human involvement by the 2020's. Alongside the platform augmentation, digital assistants are also being deployed to augment the interaction experiences further. Samsung for example is expected to invest around **\$22** billion into AI and digital augmentation of its platforms.

With the continuous adaptation to changing market preferences, brands have also entered into the new dimension of sales, the 3D visualization. With the use of virtual reality and augmented reality, retail stores have explored the most potential way to improvise their method of sale and in turn, entered the profiteer's club. According to a recent survey by Nielsen Global Connect, around **43%** of the respondents expressed their willingness to use apps and in-store guidance via recommendations thereby paving way for the retailers to further transform their stores into virtual stores.



AI adoption in the retail realm

33% incorporated AI in to generate more personalised suggestions

43% ready to use AR to make shopping interactions more sophisticated

Jaguar, a leading automobile company has also leveraged AI in it's campaign for a new electric car I-PACE. IKEA has also introduced an application 'Place' that lets customers virtually review the furniture before purchasing it

The recent pandemic has significantly magnified the online and ecommerce purchases compared to the physical stores. Safety coupled with convenience is one main reason for such a trend. Furthermore, predictions suggest that e-commerce would contribute to the retail sales by around an approximate **22%** by the year 2023 all around the world. E-commerce giants like amazon have already began integrating AI to generate new leads and enhance customer experience using 3D visualization.

Description



Recent years have witnessed a drastic change in customer behaviour as well as their buying patterns. A Major shift towards online purchases has resulted in a complete restructuring of the previously concrete retail structure.

Statistical proofs pointing towards the shifting pattern of customers towards online shopping include -

- As of early 2020, the digital population of India reached approximately **688** million active users.
- Around **150** million shopped online annually in India with this number expecting to reach **500** million by the year 2030
- As of 2019, **11%** of Indian population shopped online growing from **1%** in 2006.

While these figures represent the retail before 2020, the global pandemic that struck the world has substantially increased the online purchase traffic. The shift towards online purchases for the new as well as low frequency users is estimated to grow at a whopping **160%**.

With the pandemic forcing people to purchase online, brands and companies have begun investing in digital channels.

The pandemic has not only resulted in the overall rise of e-commerce purchases, but also a significant rise in the percentage of online purchases from individual categories. Few of the percentage rise in e-commerce purchases of products belonging to various categories include-

Apparel, Footwear and Accessories

15% from 8% and expected to reach 16%

Consumer Electronics

13% from 6% and expected to reach 15%

Personal Care Items

up from 5% to 13% and expected to reach 14%

Luxury Items

14% from 6% and expected to reach 15%

Food and Groceries

14% from 5%

Core idea of the paper

- To understand the customer perception of buying products related to three categories i.e. shopping, convenience and specialty from the e-commerce websites.
- To evaluate the potential of emerging technologies like AR and VR to enrich the online buying experience.



Research and Analysis

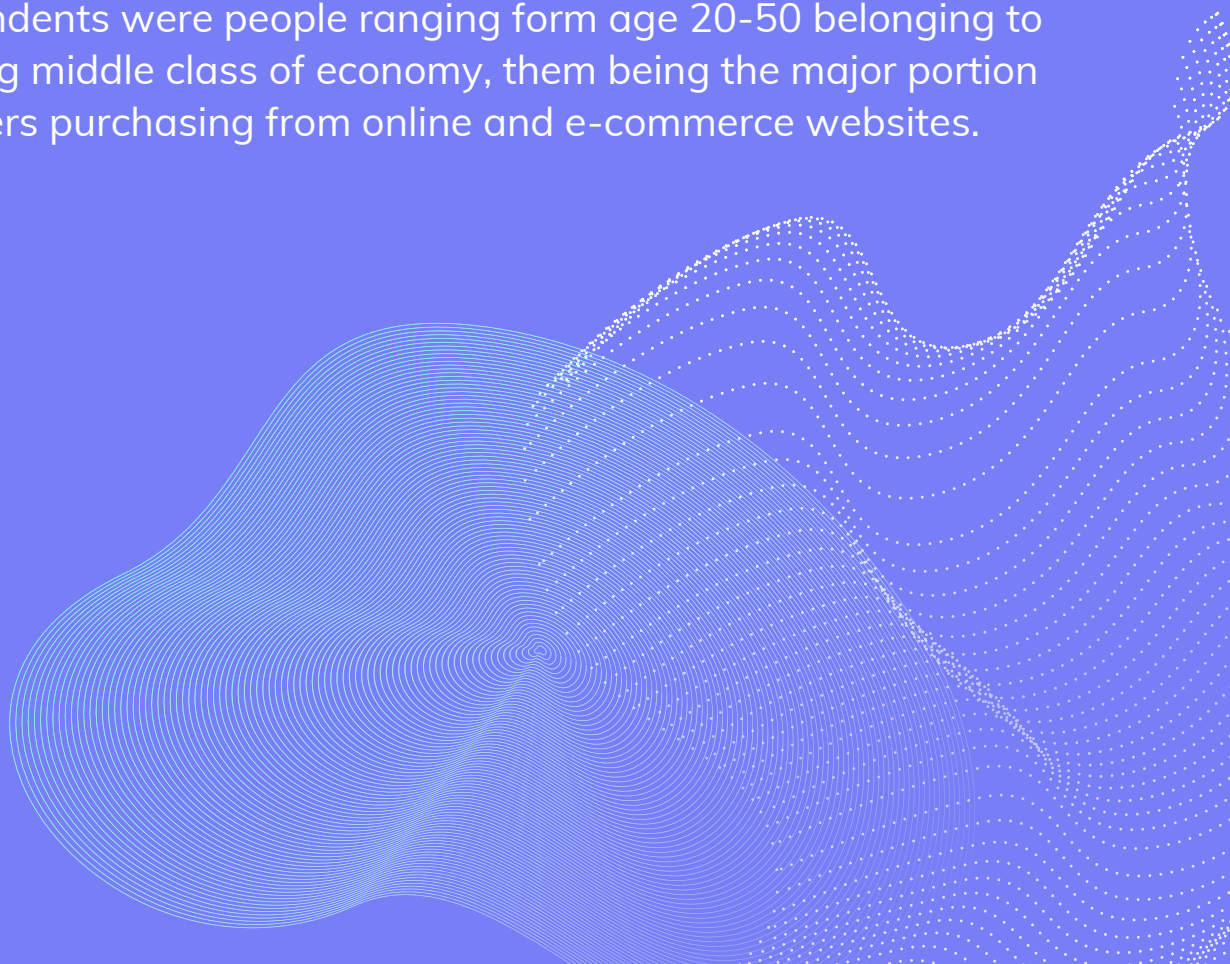
To obtain an unbiased analysis, the overall research comprises of both qualitative as well as quantitative research.

The qualitative approach of the research focused on three focus-group discussions followed by three in-depth interviews. While the focus group discussions allowed for a group insight, the in-depth interviews allowed for a more individualistic analysis of the responses.

The quantitative approach of the research includes a questionnaire answered by a set of respondents. The questionnaire consisted of open and closed questions to get data from the respondents. The extent of responses likewise outlines the attitude and perceptions of consumers towards these products like convenience, shopping and specialty.

Demographic

The respondents were people ranging from age 20-50 belonging to the working middle class of economy, them being the major portion of customers purchasing from online and e-commerce websites.



Primary Research -

Qualitative

For simplification purposes, the responses from the focus group discussion and the in-depth interview can be better understood by analyzing the responses for each category of the product-

Shopping Product Category

Focus Group Discussion :

The focus group methodology has been used to understand the perception of the respondents towards common shopping products such as apparels, electronics and accessories from E-commerce websites.

Group Dissection :

The Focus Group consisted of 4 females and 2 males all being working professionals selected from both metro as well as non-metro cities.

FGD Insights-

The key insights from the Focus Group Discussion Include-

- Cosmetics, skincare, clothing and footwear formed the majority of shopping products purchased online while beauty products and cosmetics being the category highly associated with impulse buying.
- Women have prioritized aesthetics while men have prioritized discount offers while purchasing products. Both however, considered ratings of the products.
- Familiarity with the brand plays a crucial role while purchasing products online. This can be associated with the fact that customers are aware of the size and quality to expect from familiar brands rather than unknowns.
- E-commerce giants like Myntra, Nykaa and Amazon are considered the most trustable sites for purchases under shopping category and reviews to be significant.
- To overcome the issue of fabric quality and texture mismatch, respondents also mentioned visiting a brick and mortar store to inspect the product and later ordering it online for better prices.

Responses from the Focus Group on technology transforming E-commerce:

The participants manifested positive sentiments towards the idea of virtual reality and augmented reality in online purchase experience for apparels followed by cosmetics and beauty products. Few of the many problems it is believed to improve is finding the right fit and fabric quality for apparels and the perfect shade matching skin tone for cosmetics.

However, negative sentiments were observed when the same was applied to the electronics. Customers consider the look and feel of such products to be a priority while purchasing them. Home appliances etc had mixed responses while inquired about the potential of AR and VR to better their experience.

The overall sentiment however pointed towards better experience since the customers can virtually evaluate the product instead of going from one physical store to another.

In-Depth Interview

An In-Depth Interview has been conducted with a 25 year old female from New Delhi India regarding her experience and perception of purchasing shopping products from E-commerce websites. The following summarizes the key insights from the in-depth interview-

- The respondent ranked apparel and cosmetic products as the most preferred purchases online.
- The respondent also opined that customers need to research on a personal level about the product and the size and quality issues to prevent any mismatch between the expectations and the actual product.
- The respondent also had a similar preference towards familiar brands compared to the unknown brands.
- The respondent mentioned the common underlying reasons for reluctance in online purchase are the possibility of mismatch in fabric and color, damage in delivered products, misleading quality and lack of in-person shopping experience.
- The respondent had an overall positive sentiment towards AR/VR bettering the online experience by reducing the returns and exchanges of online purchases.
- She was however of the opinion that AR/VR will help sophisticate the overall experience but not completely replace the in-person experiences.

Convenience Product Category

Two In-Depth interviews were conducted to get a qualitative analysis of the customer perception for the online purchase of convenience products. The interviewees for this purpose included:

- 1 Industry Expert in food and grocery shopping specializing in customer shopping experience through technology.
- 2 Dr. Umashankar Venkatesh, an educational entrepreneur and an experienced management academic and educational administrator.

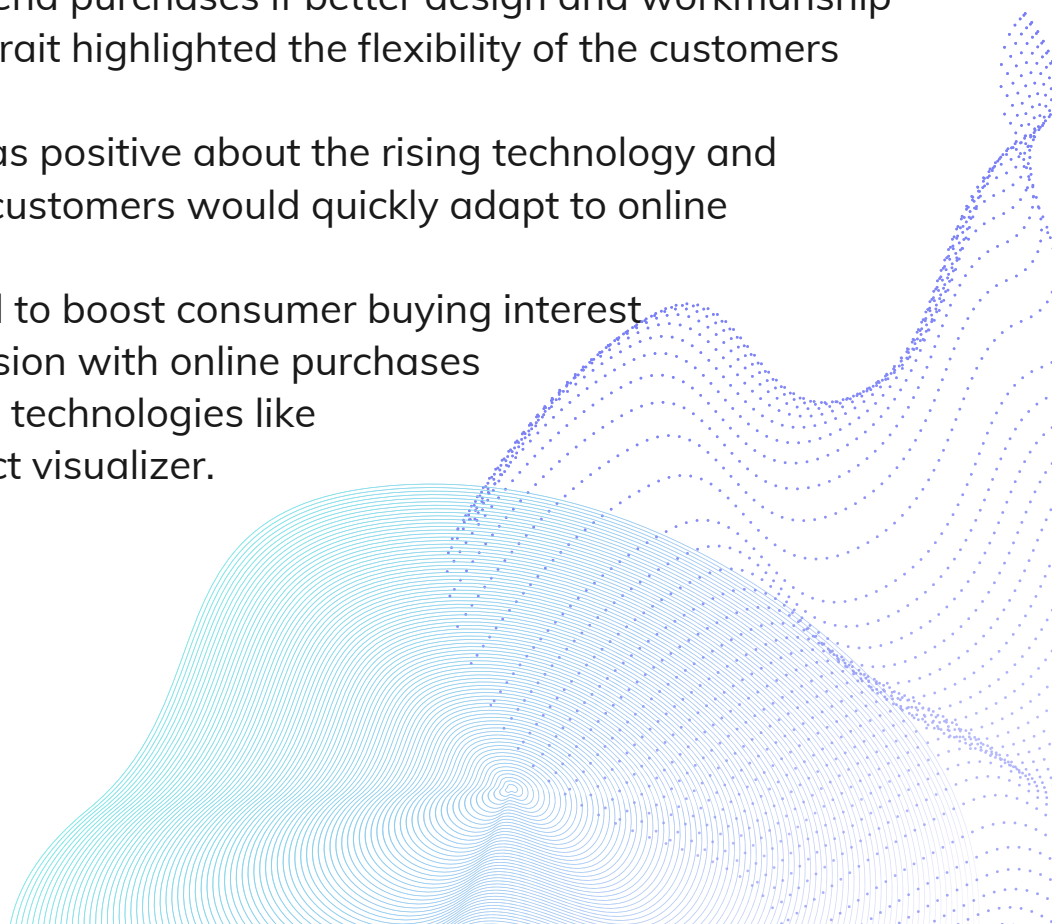
Insights from the In-depth Interview

- The COVID pandemic is great inducer of change in behavior and people are forced to buy online and many households have shifted their preferences from offline to online.
- Once the pandemic is a matter of the past, there might be a slight decrease in the rate of online purchases. However, the overall rate would be significantly higher than pre-pandemic levels.
- Perishable goods like vegetables etc are still preferred from physical stores rather than online deliveries. To leverage on these goods, the brands should ensure faster delivery times and better discount rates.
- Many Visualizers and Augmented sales avatars can be implemented in daily grocery products to observe the ingredients used in the products in an expanded manner.
- Dr. Uma Shankar was of the opinion that the FMCG sector, being the low involvement purchase does not need AR/VR; the other respondent was of the opinion that implementing AR/VR technologies is vital to focus on customer profile and delivering personalized service to customers.
- As retailers need to focus on leveraging technologies along with their core retail business, bundled offerings by technology companies for digitizing e-commerce platforms with the latest technologies should be encouraged.

Specialty Product Category

An In-Depth Interview has been conducted with an experienced management professional and jewelry store owner, Mr. Balamurugan to understand customer purchasing pattern when it came to specialty products like jewelry etc. The key insights from the interview are summarized below-

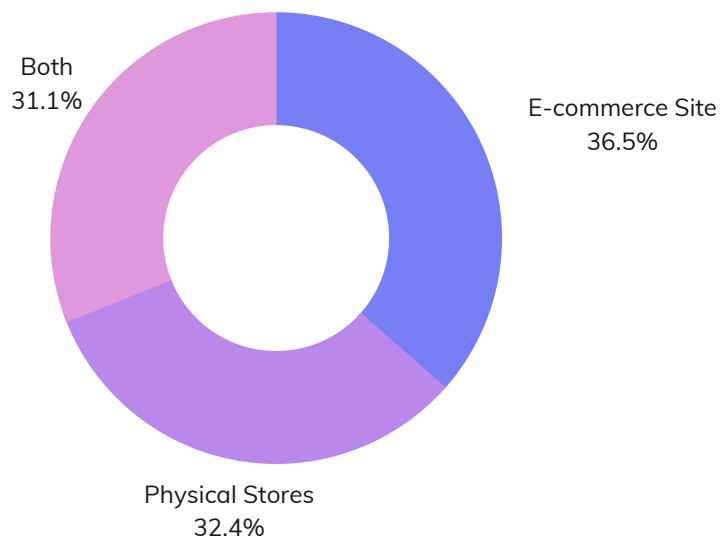
- Jewelry purchase is preferred owing to serve as both investment as well as ornamental purposes.
- Buying behavior in the last few years has changed quite drastically as it has become a highly seasonal demand now. People have become more aware and prefer to buy in off-wedding season.
- Too much volatility in the market results in a steep fall in the overall demand. Customers expect a standard range of prices and hence do not prefer to purchase during the volatile stage of prices.
- Customers rely on their prior knowledge than the efforts of the sales teams when it comes to specialty products like jewelry purchases.
- Although customers are brand specific, they often prefer unknown brands during high-end purchases if better design and workmanship is guaranteed. This trait highlighted the flexibility of the customers for a better product.
- The respondent was positive about the rising technology and mentioned that the customers would quickly adapt to online purchase of jewelry.
- There is a potential to boost consumer buying interest and take better decision with online purchases with the help of new technologies like 3D Intelligent product visualizer.



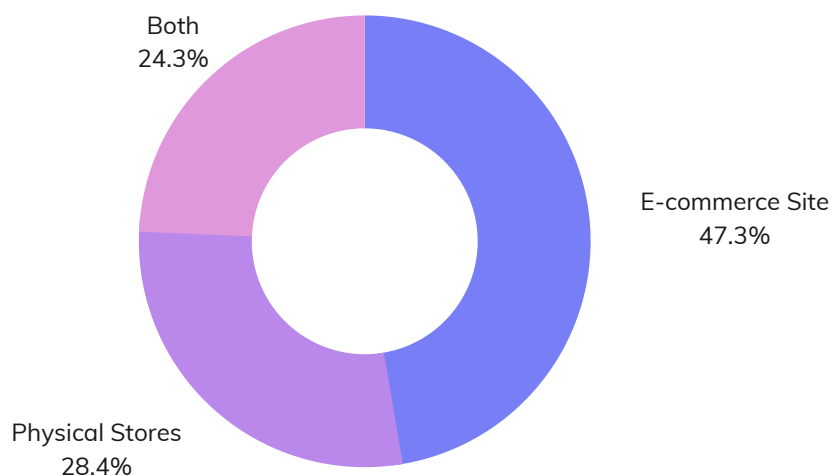
Quantitative Research

To obtain a quantitative approach towards the analysis, a questionnaire has been drafted with the key objective of highlighting customer preferences and perceptions of the markets for various categories of products. The responses have been photographically mentioned below-

Customer's mode preference for purchasing Shopping Products

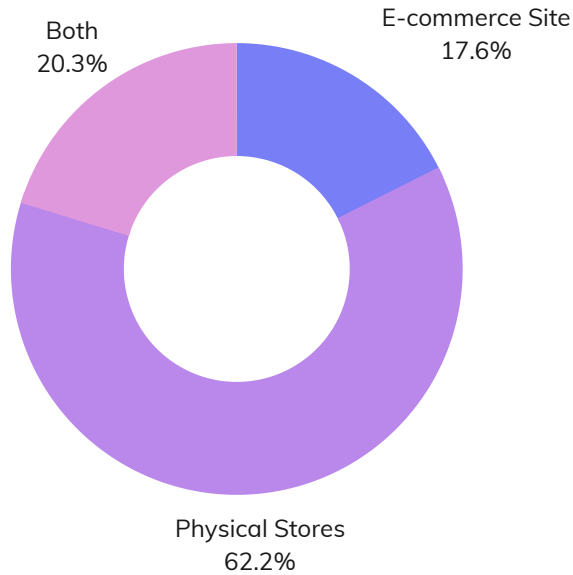
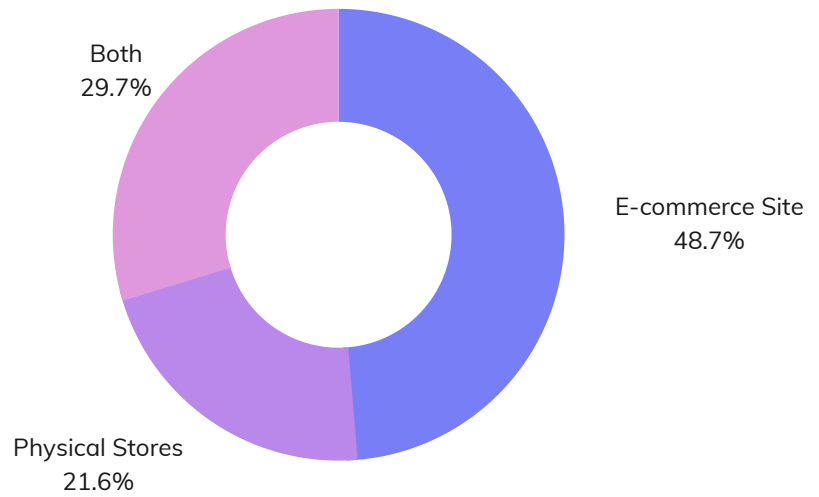


Preferred mode of Shopping - Clothing and Footwear



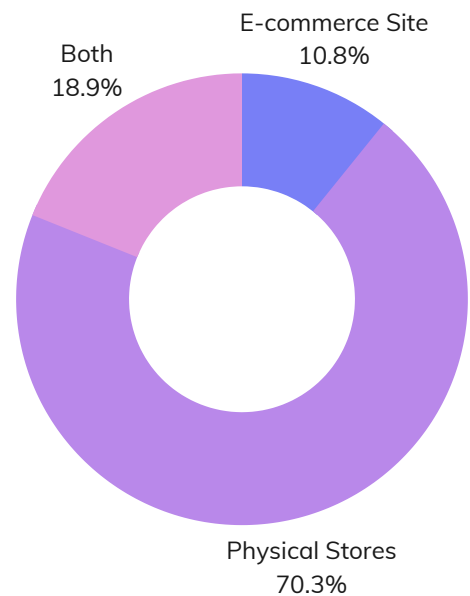
Preferred mode of Shopping - Electronics such as mobile, laptops, ear pods, speaker and TV

Preferred mode of Shopping -
Cosmetics, Skincare
and Beauty Products

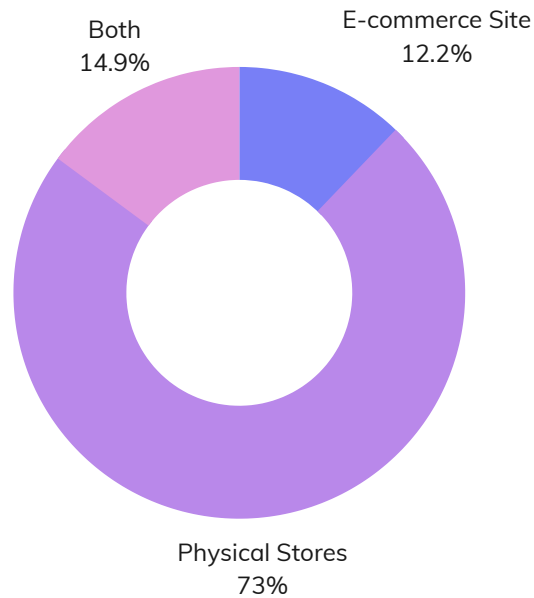


Preferred mode of Shopping -
Household appliances such as
refrigerator, washing machine and
microwave

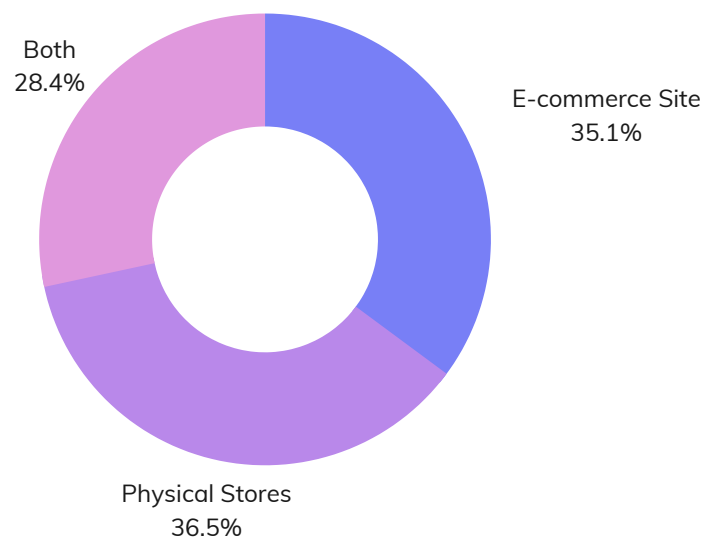
Preferred mode of Shopping -
Furniture such as bed, sofa,
dining table and cupboards



Customer's mode preference for purchasing Convenience Products

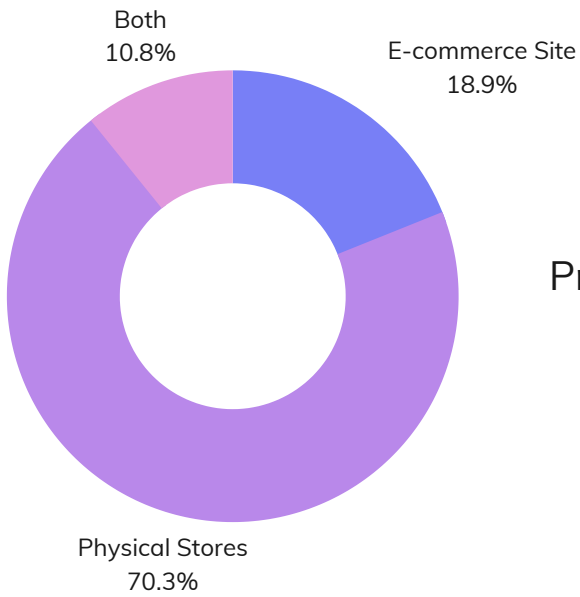


Preferred mode of Shopping - Groceries, Milk and Vegetables



Preferred mode of Shopping - Personal Care Items such as soap, shampoo and toothpaste

Customer's mode preference for purchasing Speciality Products

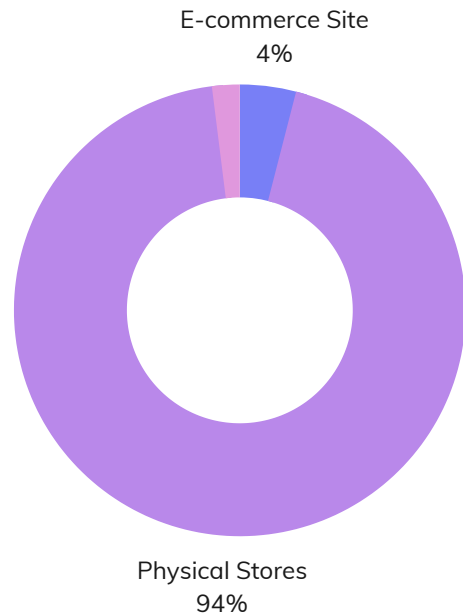


Preferred mode of Shopping -
Special Occasion Clothing

Physical Stores
70.3%

E-commerce Site
18.9%

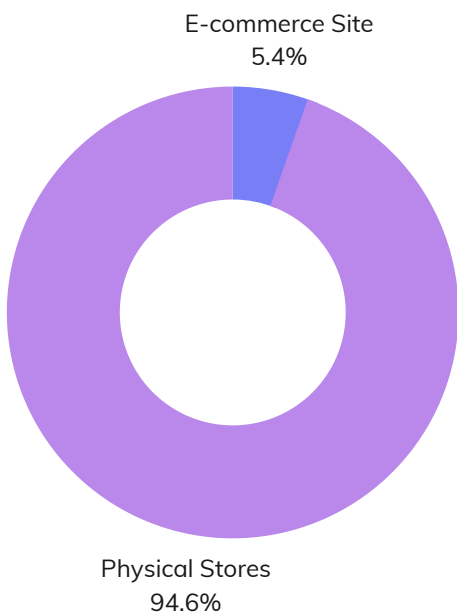
Both
10.8%



Preferred mode of Shopping -
Vehicles 2/4 wheelers

Physical Stores
94%

E-commerce Site
4%

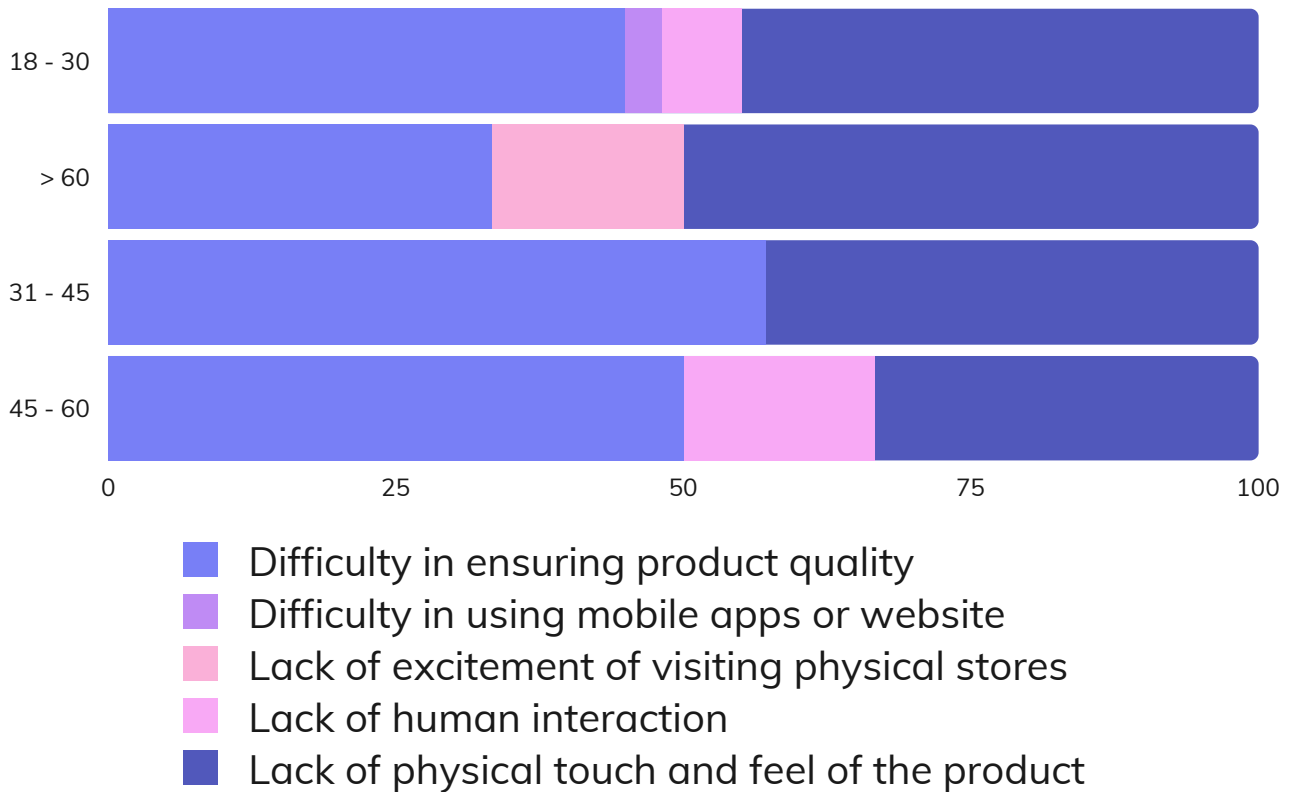


Preferred mode of Shopping -
Jewellery

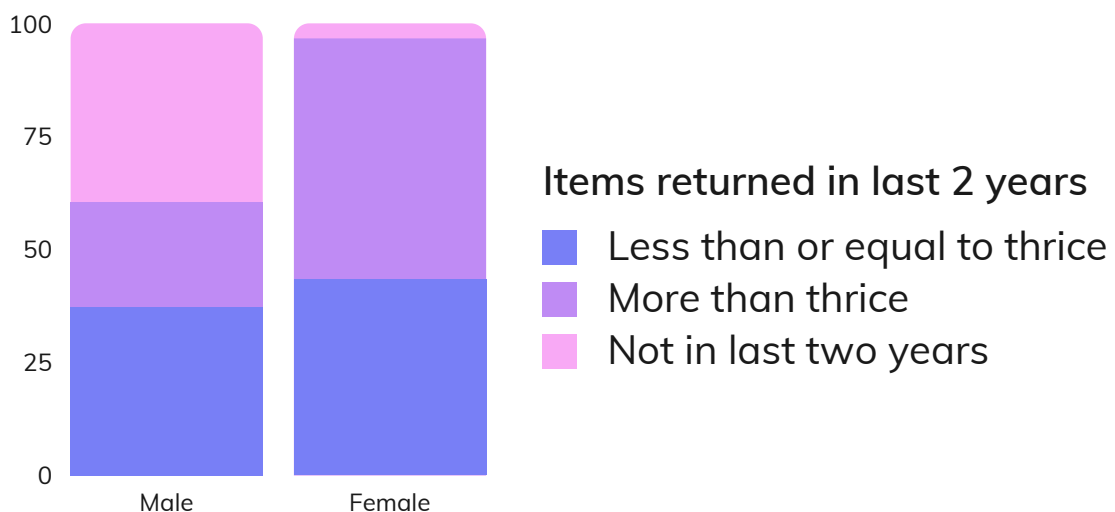
Physical Stores
94.6%

E-commerce Site
5.4%

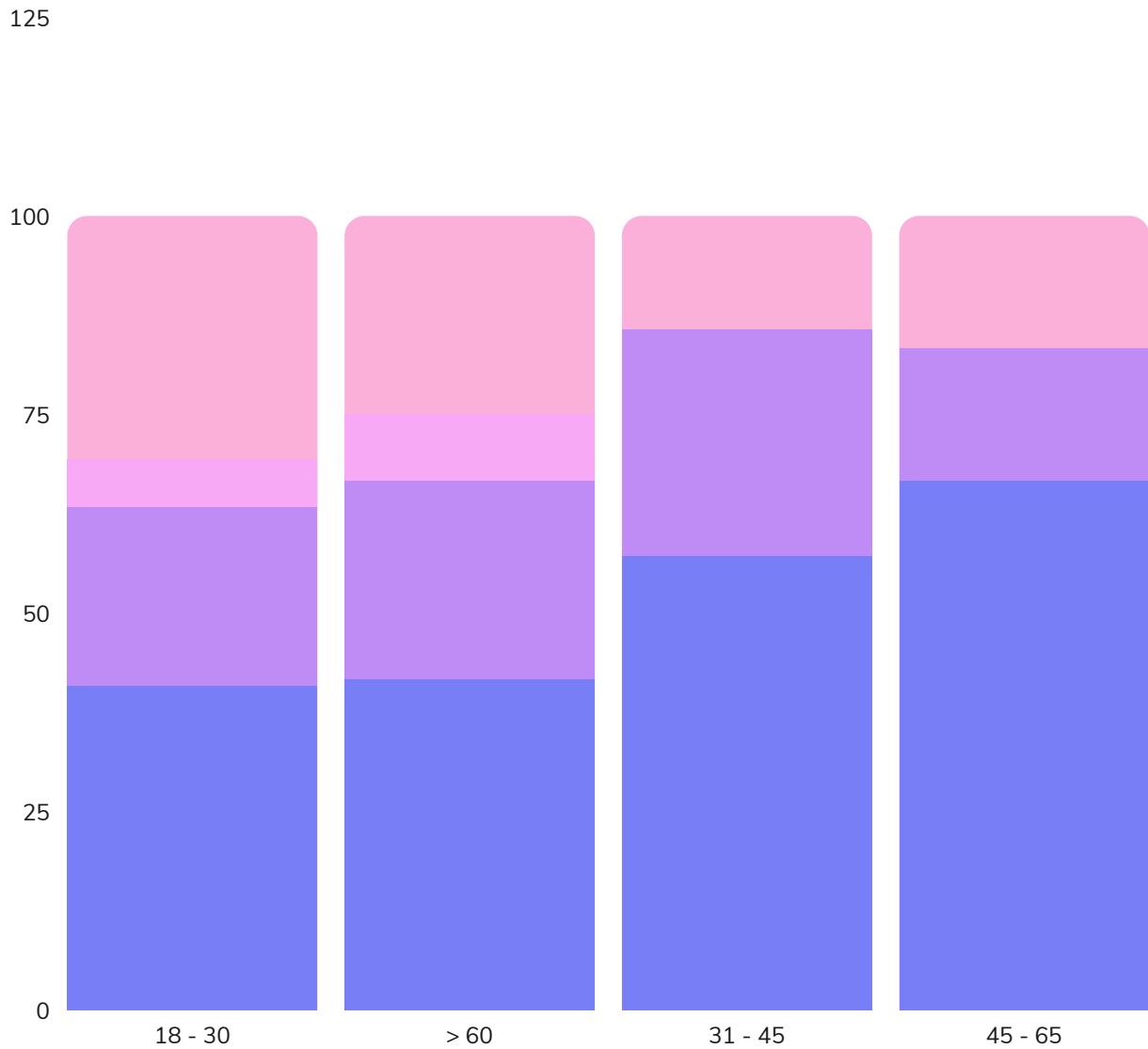
The biggest challenge faced by customers while shopping through E-commerce platforms identified for different age groups



The frequency of return of products in last 2 years because of the following reason -
Quality, colour, texture as seen on mobile apps for the online sites didn't match with the actual product



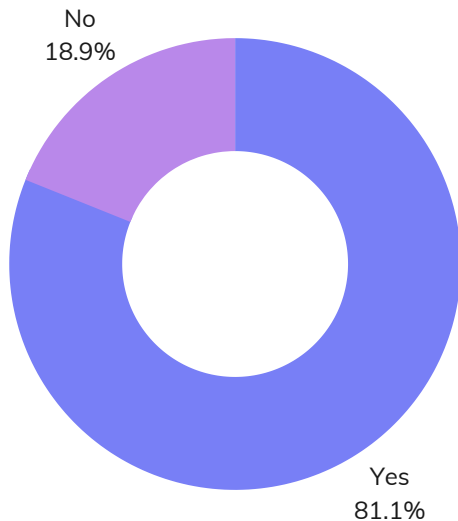
The monetary range till which customers said they are confident to shop through E-commerce sites identified for different age groups :



Monetary range till which respondents (by age) are confident to shop online

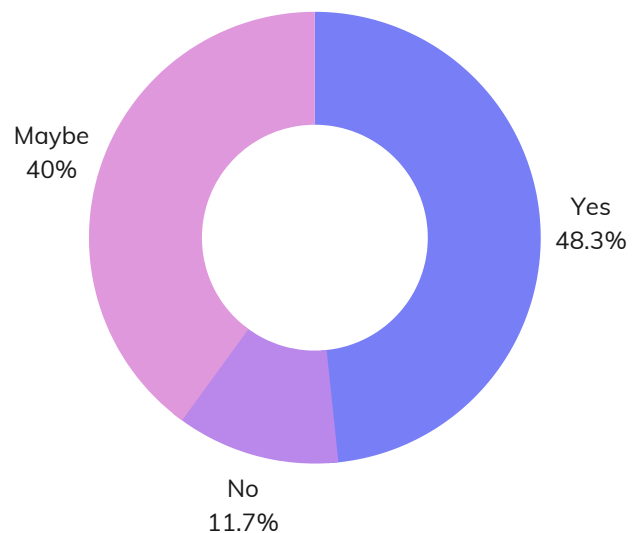
- Below 10,000
- Price doesn't matter for..
- Up to 100,000
- Up to 50,000

Recommendation seeking behaviour from family/friends for making purchase decisions for any product and the corresponding attitude towards recommendations by virtual sales avatar powered by AI for customers

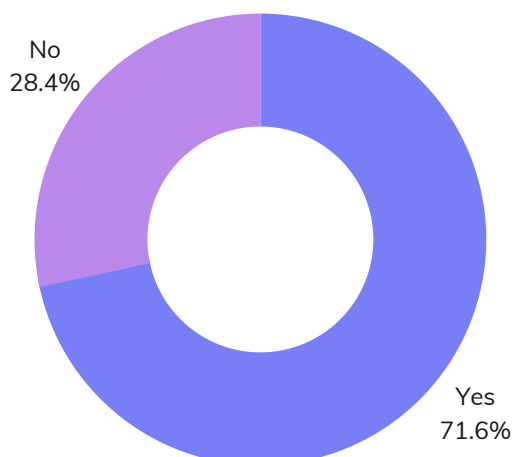


Do you seek recommendations from family/friends for making purchase decision for any products ?

Recommendation by Virtual sales avatar for online purchase



Response towards 3D viewing experience of a product, say car or wardrobe or any other appliances through an app or website and possibility of preferring online purchase over physical stores :



Response towards 3D viewing experience of products

Key Insights from the quantitative analysis-

- Customers preferred buying the category of shopping products the most and specialty products the least.
- In the shopping products categories, cosmetics and skincare gets most preference for online purchase followed by electronics such as mobile, speakers, laptops etc.
- Household appliance and furniture are mostly preferred from physical stores with only **17%** and **8%** respondents voting for e-commerce purchase for these products respectively.
- Most of the respondents preferred online shopping for purchases less than Rs. 10000.
- The main reason for online purchase emerged as convenience and the ability to purchase anytime.
- Difficulty in ensuring product quality and lack of touch/feel emerged as the main challenges for customers in buying online products.- More than **70%** of the respondents had a positive opinion regarding the recommendations of Virtual sales Avatar for online purchases.
- Around **71%** of the respondents mentioned preferring online purchases to physical in-store if they had the option to view the 3D image of the product.



Conclusion

- While the respondents had subjective opinions, the overall purchase decision online pointed towards familiar brands with better prices, higher discounts and assured quality.
- While specialty products had least preference for online purchase, the shopping category is majorly preferred online rather than offline.
- Customers involved in the purchases of different categories had a varying degree of positive sentiment towards technology bettering their e-commerce. However, the collective opinion was inclined towards the positive side.
- The interviewees also mentioned AR/VR and other technologies become highly relevant during the introduction of new products in order to explain the customers the upgrades and the advantages compared to the older products.
- Too much technological interference in the customer's purchase decision is expected to have a detrimental effect.

Recommendations

- The brands and retailers need to filter out the best possible offer and resources to the customer instead of thrashing him/her with various suggestions. This eliminates the over interference of technology on their decisions.
- Faster delivery rates, especially for perishable goods will help customers rely more on online purchases of the same.
- Although the preference of familiar brands is a customer personal factor, brands can still ensure better customer acquisition by ensuring a higher match of the quality of product to the description.
- Positive sentiments towards technological intervention powered by AI, AR and VR suggest that retail firms need to explore more use cases where these technologies can be applied to improve the customer experience.
- E-Commerce needs to employ AI in order to gather valuable insights about the customers through their purchase patterns and behavior and leverage this information to personalize their online experience.



About DaveAI

DaveAI is a visual AI platform that bridges the gap between self-assisted online discovery & salesperson-assisted offline discovery.

We help brands drive sales with advanced product discovery experiences using an interactive that mimics a human sales brain, understands customer requirements & provides hyper-personalized product recommendations.